

In Memoriam: Widukind Lenz, 1919–1995

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“Was wir letzten Endes anstreben, ist ja doch, etwas zu lernen, was wir in unser biologisches Weltbild einfügen, können; wir wollen im Grunde nicht vieles wissen, sondern die Zusammenhänge alles Lebendigen besser als bisher verstehen können.”¹ Erwin Stresemann, 1934 Congress of Ornithology in Oxford.

INTRODUCTION

Widukind Lenz (Fig. 1) died three weeks after his 76th birthday in Münster, where he had been director of the University Institute for Human Genetics between 1965 and 1984. Shortly before his death, the March of Dimes Birth Defects Foundation of the United States awarded him a special citation for lifetime achievements in research on the causes of birth defects. “In particular, he was recognized for:

Contributions over a half century to medical genetics as a clinician, teacher, investigator, scholar, consultant, ethicist and historian.

Pre-eminent work on the relationship between nature and nurture, especially with respect to growth regulation in children.

Discovery of the cause of the thalidomide syndrome (1961) and subsequent documentation of the relationship between fetal defect and time of maternal exposure.

Insights into genetic mechanisms of fundamental biological importance including the discovery of X-linked dominant inheritance with hemizygote lethality (1961) and its pertinence to the theory of half-chromatid mutations (1975).

Description of “new” birth defect syndromes such as the incompletely recessive X-linked Lenz microphthalmia syndrome (1955), the Cenani-Lenz syndrome (1955), femur-fibula-ulna (FFU) dysostosis (1967), and the caudal deficiency complex in infants of diabetic mothers (1965).

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¹Our ultimate goal is to learn something that we can fit into our biological world view; basically, we don’t want to know a lot, but rather to understand better than heretofore the relationships among all living things (trans. J.M.O.).

Taken from *Tödliche Wissenschaft* by Benno Müller. Copyright © 1984 by Rowohlt Taschenbuch GmbH, Reinbek bei Hamburg.

International collaborative studies of genetic, teratologic, and epidemiologic aspects of limb defects on an unprecedented scale with publication of numerous important articles, reviews, and the book with Czeizel and coworkers in 1994.

Pioneering studies of genetic aspects of human sex determination and sex differentiation and of male hypogonadism.

Outstanding didactic contributions including six editions of his textbook on medical genetics (1961) in German with translations into English, Spanish, and Russian.

His example as a dispassionate, objective scholar and engaged, responsible person of great personal courage and highest integrity . . .

This award [was] presented with gratitude, highest respect and best wishes.”

A few days following his correction of a draft of this citation, Lenz died shortly after an endoscopic procedure for a bile duct stricture with increasing jaundice, ascites, and emaciation, but his mind remained clear and lucid only hours before his death. His response to the news that he was to be honored in this manner was characteristically modest: “. . . I am not quite convinced



Fig. 1. Widukind Lenz during his active years in Münster 1965–1995.

that I deserve it. My role has been more that of an academic teacher and of an old time 'Gelehrter' [scholar] than of a research worker with solid, planfully executed studies. I have always tried to broaden my horizon and I kept away from overspecialization. In this respect, I feel like a [survivor] of an extinct species. But I concede this may also fulfill a function. So your proposal flatters and comforts me and I accept it happily."

BIOGRAPHICAL NOTES

Instead of a living history autobiography, Lenz [1990] submitted his *Abschiedsvorlesung* (final formal lecture as professor and chair of a department in the German university system) on the occasion of his retirement in 1984. The accompanying encomium by Vogel [1990] also does not give complete biographical data; hence, a brief overview of the life of Widukind Lenz seems appropriate.

Lenz was born on February 4, 1919 in Eichenau (Oberbayern), Germany, one of three sons. His father, Fritz Lenz (1887–1976), a professor of human genetics, was, as were many geneticists in Europe, the United States, and elsewhere, an early advocate of eugenics. Those who knew the son personally are unanimous in stating that he did not share his father's eugenic views. Before his work in eugenics, Fritz Lenz had done pioneering work in the methodology of human genetics, the validity of which has never been questioned. Thus, Widukind Lenz was taught the principles and methods of human genetics by his father, and the chapter/review on that subject in P.E. Becker's *Handbook of Human Genetics* was co-authored by both men. A biographical sketch of Fritz Lenz is in P.E. Becker's *History of Eugenics and the Third Reich* [1988]; however, more controversial evaluations of the older Lenz are given by Risom [1983] and Müller-Hill [1984]. The latter suggests that the son's (divided) loyalty did not allow him to reject his father in all respects and leaves open the possibility that therefore he must have harbored sympathies for his father's (eugenic) views (q.v. appended note).

Lenz studied medicine between 1937 and 1943 in Tübingen, Berlin, and Prague, and graduated from Greifswald medical school in 1943. Hans Bischoff (1894–1943), the chairman of pediatrics at the University of Greifswald, was responsible for suggesting Lenz's dissertation topic on the relationship between nutrition and the secular acceleration of growth and maturation, a subject that preoccupied him while he was on active military duty, a prisoner of war for 3½ years, and during the early staff period of Göttingen, Kiel, and Hamburg, where he completed training in pediatrics and human genetics in 1958. Initially he worked in the Pediatrics Department at the University of Hamburg, then directed by Karl-Heinz Schäfer (1911–1985), who encouraged Lenz's studies of the cause of the epidemic of malformations first documented by one of us (H.R.W.) early in 1961, in which Lenz identified thalidomide as its cause. The story of Lenz's involvement in the thalidomide saga has been told many times, the last by von Harnack in his obituary notice [1995].

Lenz [1990] makes light of the reasons for which the University of Hamburg appointed him in 1961 as the first holder of its newly created chair in human genetics. There is no question about the fact that at that time in Germany Lenz was one of the most highly qualified human and medical geneticists and that this appointment as well as the subsequent one in Münster in 1965 was based on solid merit (rather than a "misunderstanding of his expertise and a favorable 'supply-and-demand' ratio").

The previous holder of the chair in Münster had been Otmar Freiherr von Verschuer (1896–1969), whose legacy as a eugenicist, the major professor of Josef Mengele, and at least a temporary apologist of the Nazi regime (in his textbook of human genetics) has thrown a shadow over and raised many questions on his ethical and professional bearing during the Nazi era. In his reserved and tactful way, Lenz stated that it was difficult for him (von Verschuer) "... unmittelbar einführend zu verstehen," i.e., to develop empathy for his predecessor (personal communication to H.R.W.), who died 4 years after Lenz began work in Münster.

LEGACY

Lenz's most productive times were the later years in Hamburg and the early years in Münster. It was always fascinating and an intellectual pleasure to listen to Lenz's crystal-clear presentations or discussions. His former chief, Schäfer, used to say that Lenz had a computer brain, and Vogel documents an impressive instance of his extraordinary memory.

The high point in Lenz's professional life probably was the time around his 60th birthday. On that occasion nearly all German human geneticists attended a scientific symposium in his honor in Münster, including P.E. Becker of Göttingen and Friedrich Vogel of Heidelberg. One of us (H.R.W.), who also presented at that meeting, remembers him in best form, teaching and responding masterfully.

Lenz's scientific *oeuvre* includes more than 200 books, reviews, chapters, and scientific papers, the bulk in German, even though he was fluent (but uncomfortable) in English and could at least read French, Spanish, Italian, Dutch, and Russian. His breadth of knowledge, quality of scholarship, and clarity of presentation were admirable. Besides his interest in nutrition, growth, and maturation, Lenz had an early passion for many aspects of sex determination, sex differentiation, and gonadal function, a subject on which his father had also published as early as 1912 [Lenz F., 1912]. Skeletal and limb anomalies occupied him extensively, and after the thalidomide experience, he became the world's greatest authority on limb malformations. But Lenz also produced very carefully considered reports on genetic counseling and the challenges of medical and human genetics while never losing his contacts with pediatrics.

In recognition of his accomplishments, the University of Tübingen granted Lenz an honorary degree in 1963. In 1964, he received the Otto Heubner Prize of the *Deutsche Gesellschaft für Kinderheilkunde* (German Society of Pediatrics) and he became a member of the Na-

tional Academy of Sciences (Buenos Aires). In 1966, he was elected a member of the Academy of Sciences and Art of Mainz and in 1970, of the German Academy of Scientists *Leopoldina*. The International Society for Social Responsibility in the Sciences bestowed its Albert Einstein Prize (given only once every 10 years) on Lenz in 1971. In 1972, the Federal Government of Germany decorated Lenz with the *Bundesverdienstkreuz* (Cross of Merit) of the First Class. He was also the recipient of the Gold Medal of the Haakert Foundation for Prenatal Medicine and of the Ullrich-Medal for research in clinical genetics. He was a member of the Congenital Anomaly Research Association of Japan and of the American Society of Human Genetics.

His text *Medizinische Genetik* was the best written on the subject at the time. It went through six editions and was translated into English, Spanish, Japanese, and Russian. In 1978–1979, Lenz published a monograph on human genetics in psychology and psychiatry. His excellent monographic treatment (with Frank Majewski) of limb malformations in the Schinz *Atlas der Roentgendiagnostik* (1990) unfortunately is not accessible to most English-speaking clinical geneticists. Thus as a tribute to Dr. Lenz, it is the intention of a group of clinicians and basic scientists (Shubin, Fallon, Bersu, Pettersen, Kochhar, Neri, Gurrieri, Genuardi, Cohen, Lurie, Scott Gilbert, Majewski, Froster, and Opitz) interested in limb evolution, morphology, morphogenesis, malformations, and teratogenesis to publish a Lenz memorial volume on that subject.

As a person, Lenz impressed colleagues with his deep humanity, exceptional intellect, sensitivity, gentle, shy reserve, great kindness, but also deep conscience and inner seriousness, which never allowed him to evade the hard questions of life. It is little known that during World War II and as a prisoner of war, Lenz wrote very moving poems (see attached); in later years he derived pleasure in composing limericks. He endured great personal sorrow and pain, including the death of his son on February 8, 1980, with admirable fortitude always supported by his devoted wife, Dr. Almuth Lenz, with whom he trained in internal medicine in Kiel in 1951. Lenz is also survived by his pediatrician daughter, Juliane.

Toward the end of his life, Lenz probably subscribed to the sentiments of the 70-year-old August Weismann when he wrote: "There will never be an end to our study of life; and whenever we attempt a preliminary conclusion it will be clear that our best efforts were no more than a step towards something even better." Widukind Lenz died on February 25, 1995.

In his professional and personal life, Widukind Lenz incorporated an ideal of searching fearlessly for the truth, and in that pursuit his life was characterized by humility, integrity, and honorability—the best that can be said about any scientist or person with the exceptional gifts that graced Widukind Lenz.

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NOTE 1

In response to the provocative question by Müller-Hill concerning the historical responsibility (really guilt, *Schuld*) of Fischer, Lenz, and v. Verschuer, W. Lenz gave the following response (translation J.M.O.):

"The question concerning historical guilt is framed so globally that it is impossible to answer with a simple yes or no. Guilt for what? Guilt because of which statements, which activities, which silence, which omission? Since the terrible events [of 1933–1945] became known, I am of the opinion that everyone has to ask him/herself whether and how he/she assumed co-responsibility. Basically, the matter of personal conscience can be addressed only by each individual concerned; in any event, an outsider without personal experience of the times and persons involved has to be careful with his/her judgment. I know that my father as much as I were conscious of co-responsibility (*Mitschuld*) and suffered from it, although he probably would have put it differently. It seems to me that the question concerning guilt is different from the attempt to understand all of these developments from a historical perspective. I think that this requires

an initial attempt to determine what Fischer, Lenz, von Verschuer knew and understood of scientific, biological, and political issues, what they considered desirable, to what extent they were children of their culture, their times, and their class. It seems evident to me that many things in which we see today evidence of evil intent simply were based on a misjudgment of reality with basically good intentions. Nowhere is it possible for me to recognize in anything that any of these three [individuals] said or wrote a way to the hatred, fanaticism, and sadism that made Auschwitz possible. Also, as far as I know, those responsible for Auschwitz never based themselves on any of these three men to justify their brutality, but rather on models or presumed models of a totally opposite direction, which, in those years, used to preach implacable antagonism, hatred, and strife toward the extermination of their antagonists.

I am sure that if you had known my father personally and had evaluated his opinions not only to look for evidence against him, you would have come to a fairer judgment. In any event, since the end of the war, I have talked to many persons who knew or who had known my father and who not infrequently distanced themselves critically from his prejudices or values; however, I never encountered an opinion such as yours. I certainly do not want to deny you the right to appear as advocate or a preacher (*Prediger*) . . . for a cause. Every human being is subject to moral evaluation, especially when his/her opinions or actions affect the public. There have to be prosecutors (*Ankläger*) and attorneys; however, attorneys have an inherently unilateral view of their task. In this way they fulfill an important function in society without, however, feeling as judges or historians. If a prosecutor attains the power of a judge, law must suffer."

NOTE 2 Two Poems by Widukind Lenz

Prag, 1940

Nie kann ich mit meinem innern Ernste
vor des Daseins schweren Fragen weichen
und sie brennen in mir immer tiefer,
finden keinen Halt und keine Antwort.

Immer seh ich tapfre junge Männer
streiten als die Helden beider Seiten,
blind in ihrem Hassen ohne Ende,
und ihr Glaube ist ein tiefes Dunkel,
das sie doch für Tageshelle halten.

Und ich trete still zurück vom Kampfe,
suche mir ein stilles gutes Wirken
ohne Ruhm und ohne große Hoffnung,
aber eines weiß ich: ohne Irrtum.

Im Gefangenenerlager, 1945

Hinter den Bergen der Zeit
breiten sich, ewig im Lichte
sinkender Sonne die Täler
seliger Kinderzeit,
unbetretbar und rein.
Doch unsere ruhlose Seele
sucht noch der alten Gesichte
langsam entschwindendes Sein.

Von der Erfüllbarkeit
lösen wir endlich die Wünsche,
reifen in bitteren Schmerzen
wachsener Einsamkeit.

Noch ist das Leben nicht leer
Liebe geht niemals verloren.
Stille Entsagung im Herzen
bleibt uns. Was brauchen wir mehr?

Prag, 1940

I am commanded by an inner gravity
Never to evade the serious questions of life
burning ever deeper
without end or answer.

How many men of courage
contend as heroes on both sides
blinded by hatred without end
their belief a darkness
mistaken as the light of day.

Quietly stepping back from battle
I am looking for a quiet way to be effective
without glory or great hope, but,
as I hope with certainty, also without blame.

In a prison camp—1945

Beyond the peaks of time
eternally bathed in sunset light
extend the vales of blessed
childhood innocence, unreachable and pure.
Yet, our restless soul
continues to long for the vanishing image
of familiar faces.

Maturing in bitter pain
and growing isolation
we learn at last to sever
wishes from fulfillment.

But, life is not empty yet
love is never lost.
Our heart is left with quiet resignation
what more do we need?